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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,612	12/20/2001	David M. Fullmer	9D-WP-19718	9074

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/026,612

Applicant(s)

FULLMER ET AL.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-5, 7, 8 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17).

Chau discloses a water softener system comprising a hard water flow pipe through which hard water flows, a modular water softener assembly comprising an elongated tube, a first end cap coupled to the tube, a regeneration tank in flow communication with the water softener assembly containing regenerating water softening particles, and a riser pipe extending longitudinally within the water softener tube comprising a distributor end. Chau also discloses a method for installing a

modular water softener assembly comprising the steps of providing the hard water flow pipe, providing the outlet pipe through which soft water flows, and installing the water softener assembly. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a water softener system as taught by Chau to provide a fluid treatment system with a water softening mechanism so that the hard water can be effectively treated by flowing down via gravity and pressure through the ion exchange medium.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17), as applied supra to paragraph 2 above, in view of Nowlin et al (5,464,532; 10, 12, 14, 16 & 26 in Fig. 1; col. 2, lines 13-46).

Claim 6 call for the water softening resin beads forming a water softening resin bed. Nowlin et al disclose the water softening resin beads forming a water softening resin bed in a water softener system. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the water softening resin beads as taught by Nowlin et al in the water softener system of Chau since it is well known in the art that resin beads effectively remove hardness ions from the hard water to be processed.

4. Claims 9-14 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17), as applied supra to paragraph 2 above, in view of Lyall (3,385,441; col. 2, line 38 through col. 3, line 36).

Claims 9-14 and 34 call for the softening capacity ranging between 2,000 to 9,000 grain capacity. Lyall discloses a water softener system producing approximately 10 to 20 gallons of soft water starting with an influent hardness of approximately 20 grains per gallon. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a water softener system with the grain capacity as taught by Lyall in the water softener system of Chau since with this capacity the softener would receive sufficient water softening and treating material to provide sufficient soft water for the system.

Claim 13 calls for a "tube length of about 18 inches". The specification contains no disclosure of either the critical nature of this requirement or any unexpected results arising therefrom, and as such this requirement would be arbitrary and therefor obvious. Applicants must show that this requirement is critical. In re Woodruff, 16 USPQ 2d 1934.

5. Claims 15-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17), as applied supra to paragraph 4 above, in view of Lyall (3,385,441; col. 2, line 38 through col. 3, line 36), and further in view of Lim et al (4,518,505; Abstract; col. 1, lines 5-15 and lines 33-37; col. 7, lines 20-32 and lines 43-53).

Claims 15-30 call for a water heater to heat water in the tank. Lim et al disclose a water softener system with a heater to heat water in the tank. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to

provide a heater as taught by Lim et al in the water softener of Chau since it is well known in the art that heating the hard water in order to enable or accelerate the chemical reactions leading to the precipitation of the scale forming the divalent metal ions.

Claim 21 calls for a "tube length of about 18 inches". The specification contains no disclosure of either the critical nature of this requirement or any unexpected results arising therefrom, and as such this requirement would be arbitrary and therefor obvious. Applicants must show that this requirement is critical. In re Woodruff, 16 USPQ 2d 1934.

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Moortele (6,238,567 B1) discloses a method of making brine.
- Maruyama et al (6,596,159 B1) disclose an automatic regeneration valve for water softener.
- Zabinski et al (5,751,598) disclose a water softening apparatus.
- Spiegl (4,332,678) discloses a system for the softening of water.
- Johnson (5,651,880) discloses a water softening brine tank.
- Zabinski et al (5,751,598) disclose a water softening apparatus.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571)

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272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0987.



**Minh-Chau Pham**

**Patent Examiner**

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January 22, 2004